

Four years after its creation, the Canadian Ministry of Science and Technology is to be reorganised. News of the change was given by the Minister of State for Science and Technology, Mr C. M. Drury, at the thirteenth Pacific Science Congress. "The ministry's job has been to advise the government on how science and technology can be used and developed to the best advantage of Canada", he said. "This is a difficult task and we have learned much about the capabilities of such a horizontal ministry in the four years of its existence. Based on this experience the ministry is now being re-organised in order to enable it to function more effectively."

It will be organised at the working level to communicate with the three principal segments of the scientific community—universities, industry and government and will include the many professional and learned societies. The ministry's policy-making role was defined by Mr Drury in two categories: major continuous policy assignments with long-term implications, such as development of a national capacity to study and assess the impact of science and technology on society; and development of policies and programs for the co-ordinated and large-scale use of scientific resources beyond the scope of a single agency or government, such as the oceans policy.

"The job of the ministry", said the minister, "is not to displace or duplicate the roles of existing departments and agencies in science, engineering and technology. Nor will we try to become a sort of national oracle for science, issuing decrees on what scientists in government should and should not be doing."

● A discussion on Canadian science policy showed how far apart the bureaucrats and ordinary scientists are. While the Minister outlined precisely what science policy meant to the government, the Dean of the University of British Columbia's Faculty of Graduate Studies, P. A. Larkin, declared himself confused and be-

wildered by the concept itself—and abashed by the way in which it was being carried out. And as for communication on the subject between scientists and government, he said: "You have about as much chance of getting through as if you were reciting Gaelic poetry to a deaf seagull."

Larkin called his address "Ask Archimedes", because, he said, interest in science policy goes back a long way: "For example, Archimedes used his talents in many ways in the service of his native city of Syracuse, particularly in times of war, and presumably the king of Syracuse thus had a 'science

Science in Canada

from David Spurgeon, Ottawa

policy'—which was, 'Ask Archimedes'."

On the other hand, said Larkin, Canada's science policy for 50 years was "me too", meaning that it simply copied the policies of other countries. "And its implementation was accomplished when C. D. Howe, the 'minister of everything', played golf with C. J. Mackenzie, who, as the President of the National Research Council, was the architect of the national determination to build scientific intellectual resources."

Later, Larkin continued, many reports were published on the national scientific effort. "Virtually every report by a committee or task force on science policy in the last 20 years has had something to say about the failures in coordination, communication, and integration; and the frightful sins of duplication, procrastination, and bureaucratisation. Since the most recent reports sound very like the older ones, it seems likely that either no one reads the reports or, if they do, they pay little attention."

Outlining some of the main thrusts of science policy thinking, Larkin declared himself—and others—be-

wildered. It has become obvious that so many changes are taking place so rapidly, he said, that no one has a good grasp of where we are collectively headed. "Even if someone could see it all clearly, it is most unlikely that he could do anything about it. World wide, science and technology are in a state of extremely rapid and turbulent evolution. There are so many scientists, and communications have become so good, that problems are perceived, attacked, solved and the solutions applied almost before most of us are aware of them. . . . Science policy has become a curiously all-pervasive and eclectic exercise in which it is increasingly difficult to judge whether you are worrying about the right thing."

Furthermore, said Larkin, most reports concerned with science policy are obsolete by the time they are published. Few read them any more. Most are "essentially a condensed summary of a consensus that has not only been reached but partly implemented before the report is made public. With several such studies going on at once, the national capital often gives the impression of being a full time continuous scientific conference in which everybody is writing papers and no one is attending the sessions at which the papers are presented."

The committee, task forces, commissions and the senior Civil Service, said Larkin, "move along close to the margin of what almost seems uncontrollable change, documenting and formalising what has already happened, arguing a bit about who thought of it first (when none of them did), performing the apparently essential tasks of administering and reorganising, but in reality never realising they are like the bubbles in beer, produced by pressures that are quite incomprehensible."

Mr Drury called Larkin's comments about communication between scientists and government "cynical", and said that some institutions and mechanisms already existed for such communication, and that one task of his ministry was to devise other methods.

switch some of its production to an entirely new automobile concept. The big car makers have, after all, raised enough complaints about the relatively minor production changes necessary to meet air pollution standards.

Those obstacles to commercial production are the chief factors which prompted the House of Representatives to approve massive federal support for a research and development effort last week. The bill, which was largely the work of Representative Mike McCormack, instructs the Energy Research and Development Administration to

devote more money to developing advanced battery technology. But the heart of the measure is a demonstration programme through which the federal government will underwrite the costs of at least 7,500 electric cars during the next five years.

The purpose of the demonstration programme, according to a report written by the House Science and Technology Committee, "is to get present and future state-of-the-art electric vehicles out into every region of the country". They will be used in federal, state and local government fleets, by

businesses and by individuals, to gain experience of driving performance, maintenance costs and so on. An important aspect of the operation, however, is that it will provide an incentive for industry to set up the production facilities, which should pave the way for mass production later.

The bill was passed easily by the House—by 308 votes to 60—and the Senate Commerce Committee will hold hearings on a similar measure early next month.

It is expected that the Senate will also pass it easily. □